

TITLE OF INVENTION  
VESSELS FOR MULTICOMPONENT PRODUCTS

SPECIFICATION

5 BACKGROUND OF THE INVENTION

FIELD OF INVENTION

The Invention ~~eoneems~~ refers to containers ~~utilizingin~~ which there can be stored several ~~eomponents~~, ~~components~~ different in structure and/or in their aggregative state, mixed immediately before ~~consumption~~ ~~use~~ to be preserved for 10 a long period ~~of time~~ and to create the effect of freshly-mixed-prepared food stuffsproducts, healthcare products, cosmetics, chemical agents, etc.

PREVIOUS LEVEL OF ENGINEERING

Different types of the design of ~~reservoirs~~-vessels intended for storage of various substances and their mixtures in given proportions are widely known in 15 science and ~~engineering~~technology.

Thus, ~~for example~~, it is known a device of a bottle cover for ~~dosed~~-out ~~dosed~~ introduction of liquid or solid substances into a liquid (US Patent No. Patent US № 6561232; МПК B65BIPC B65B 03/04; published 13.05.2003). It consists ~~consisting~~ of a container ~~for the~~ ~~for a~~ basic component, a cover with ~~the~~ ~~with a~~ chamber filled with a substance under pressure, one or more tubular containers filled with a liquid or solid introduced component. ~~The, the~~ The device is also ~~supplied~~ ~~provided~~ with a disrupting element. The above-mentioned device uses a complex multistage system of containers, put into action after the chamber in the cover is depressurized, and the working volume of the introduced 20 component is limited by the construction ~~of a~~ ~~of the~~ tubular container.

It is also ~~Also~~ -known is a device of ~~the~~ ~~of a~~ separate container (Patent US № US Patent No. 3856138; МПК B65D81/32C1IPC B65D81/32C1; published in 1974). ~~The device is a reservoir~~, ~~representing a vessel~~ consisting of a receptacle and a container, ~~which are laid~~ ~~placed~~ concentrically ~~to each other~~ and ~~are~~ ~~and~~ sealed with a bottom plug of the receptacle. The cover ~~has a screw~~ ~~dis provided~~ ~~with a threaded~~ joint. The container is structurally designed ~~with the~~ ~~with an~~ open bottom. ~~When a cover is being removed, Removal of the cover results in that the~~

container, connected to it, connected thereto leaves the sealed joint with the bottom plug:plug, which in turn results in mixing up the components from the container and the receptacle.

This device can be used only if the container is removed from the receptacle. Thus, thus, laying out arrangement of the container along all the height of the receptacle does not make it possible to mix the components at the moment of putting the device into operation.

From the technical point of view, the closest prior art to the present invention is the device for mixing up fluid and liquid fluids and liquids (Patent RU №RU-Patent No. 2146641; МИК-B65D81/32IPC B65D81/32; published 29.07.1996) is the closest to the above-mentioned device. It was chosen as the prototype and it consists, consisting of the first a receptacle for a liquid with an entry opening, closed with a cover and the second receptacle for a fluid, fitted arranged into the upper part of the first receptacle, the external housing of the second receptacle with a breaking element in the form a pin, the connecting pipe and the drain pipe submerged into a liquid. The specified device operates as follows: initially it is necessary to wind up the cover till it stops, the second receptacle moves downwardly, the pin breaks a membrane of the second receptacle. Then, then the cover must be turned turn in the opposite direction the cover right about so that, the second receptacle moves upwards. Under pressure, the fluid from the second receptacle goes moves under pressure through the system of channels into the receptacle with a liquid through the system of channels. After that, afterwards it is necessary to remove the empty second receptacle and the external housing with the breaking element. The above-mentioned device is not widely used as it has limited functional capabilities and rather a rather complex designconstruction. The device can be used only after performing several sequential operations; however, thereby, the process of mixing up is irreversible, i.e. the consumer user does not have an opportunity to manage the process of mixing up the components at his own discretion.

## SUMMARY OF THE INVENTION

The offered invention aims at developing of the reservoir for the aim of the proposed invention is the development of a vessel for multicomponent products, providing the-for reliability of its designconstruction; easy and secure 5 depressurization of the container with an introduced component; reduction of actions to performbe performed -to activate the process of mixing upmixing process; removal release of the end-product without the removal of the container; creation of the new functional capabilities, allowing to manage the process of mixing up the components. Achievement of the set aims will provide the-for an 10 easy use of the device, including the possibility to model modify parameters of the end product just before using it for its intended purpose.

The set aim is achieved as follows: the reservoirin that the vessel for multicomponent products contains a receptacle for thefor a basic component, a demountable cover having a plug connection with the receptacle, a container for 15 the introduced component, fitted into arranged in the upper part of the receptacle. It also has,provided with at least,least one channel for the output of the end product; additionally the container is provided with at least one opening;. There is, at least, one hole in the container; additionally there provided is a valve closing the hole opening of the container. The; the container and the valve are connected 20 with the possibility to be displaceddisplaceable one from therelative to each other along the along guide members. The; the cover can interact with the container and the valve.

The offered reservoir proposed vessel differs from the prototype in following:that it contains,contains at least,least one channel for the output of the 25 end product. There is,; the container is provided with at least,least one hole in the containeropening; additionally there provided is a valve closing the hole opening of the container. The; the container and the valve are connected with the possibility to be displaced from displaceable relative to each other along the guide members. The cover can be dismounted from the container or the valve; itand it 30 can also-ean be fixedly connected to them.

~~Presence of, at least, one hole~~Provision of at least one opening in the container allows easy and safe depressurization of the container, which does not ~~demand~~require breaking of a membrane. Additional installation of the valve on the container, which closes the ~~hole~~opening of the container, ~~provides~~provides for reliability of the ~~design~~construction, reduction of actions necessary to activate the ~~process of mixing up~~mixing process. ~~Presence of, at least,~~Provision of at least one channel for the ~~output~~removal of the end-product provides ~~makes it possible to take out~~for release of the end-product without the removal of the container. ~~Working out of a~~Provision of the cover with the possibility of ~~interaction~~interacting with the container or the valve and also the connection of the container and the valve ~~displaceable relative to~~with the possibility to be displaced from each other along the guide members ~~creates~~provides for some new functional capabilities, allowing ~~the possibility~~ to manage the process of mixing ~~up the~~the components and to ~~model~~modify parameters of the end product just before using it for its intended purpose.

~~The detachable~~Detachable—connection of the cover ~~with~~with the receptacle can be made in the form of a screwed connection, a ~~retention pin~~clamp, etc.

20 The container can be located inside the upper part of ~~container~~receptacle, and the detachable connection with the cover can be ~~fitted onto~~arranged on the receptacle.

25 The container can be located ~~on the outside~~ of the upper part of the receptacle, and the valve can be ~~fitted~~arranged inside the ~~container~~; container, the detachable connection with the cover is ~~located~~arranged on the container. In case if the container is placed ~~on the outside~~ of the upper part of the receptacle, the valve can be located on the outside of the container and the detachable connection with the cover is ~~set~~arranged on the valve.

30 The cover interacts with the container or the valve with its ~~internal~~inner part which can be flat or in the form of a binding element of any of the known configurations (a push bar, a toothed member, a ~~spiking~~hub, an advancing cam, a

~~retention pin clamp~~, a plug connector, etc.). The cover can be fixedly connected to the container or the valve, for example, by welding in the form of a one-piece construction; ~~the or the~~ the cover can be set on the valve or the container using expendable fasteners or any other known ~~ways-methods~~ of fixed connection.

5 The container or the valve, respectively, can be provided with the-binding elements - push bars, toothed members, ~~spikingshubs~~, advancing cams, ~~retention pins~~, ~~and clamps~~, plug connectors.

10 In case the valve is ~~set on the~~ arranged outside of the container, the cover (with the help of the binding element) fixes the container and the valve through the binding element in position a position when the valve closes the hole opening of the container. When removed, the cover transfers the movement to the container through the binding element.

15 In case the valve is ~~established~~ arranged inside of the container, the cover (with the help of the binding element) fixes the container and the valve through the binding element in position in a position when the valve closes the hole opening of the container. When the cover is removed, the movement is transferred to the valve through the binding element; ~~element, the~~ displacement of the valve results in its detachment with the hole opening of the container.

20 Displacement of the valve and the container relative to each other one from the other can be carried out through the indirect action of the of a spring-controlled unit element placed between the container and the valve. As a spring element Any any known spring group or a gasket can be used, made from any of any plastic material, can be used as a spring controlled unit P. The presence of a spring-controlled the spring element unit allows to facilitate the process of removal of the cover due to the action of unclasping of the spring controlled unit element. Forces, Forces arising at this moment, thereby give an additional movement to the valve, which results in detachment of the valve and the hole opening of the container. The spring-controlled unit element is preferable in case if the inner part 25 of the cover is flat.

30 Displacement of the valve and the container relative to each other one from

the other can be carried out through the creation of the positive excess pressure of one of the components. In this case when the cover is removed from the container, the valve and the container are displaced one from the other relative to each other, opening the hole opening of the container.

5 If the valve is influenced by affected by the spring-controlled unit element and/or positive excess pressure of a component in the container, the cover fixes the container and the valve in position when the valve closes the hole opening of the container. When the cover is removed, the spring-controlled unit element and/or positive the excess pressure of a of the component in the container  
10 transfer the movement to the valve, which results in displacement of the valve from the hole opening of the container.

In case of fixed of a fixed connection of the valve with the cover, the cover fixes the container and the valve in position a position when the valve closes the hole opening of the container. When the cover is displaced, so is the valve the  
15 valve is displaced as well. If Additional provision of a removable cap is fitted into the cover, it in this case facilitates the use of the offered proposed device.

The valve can be made in the form of an independent construction or as an element of the receptacle or the container.

Thus, removal or displacement of a cover the cover sets the reservoir vessel  
20 in the position "open"; "open", simultaneously the valve and the container are displaced one from the other relative to each other. Displacement of the valve and the container one from the other relative to each other results from the direct mechanical effect, if when the cover is connected fixedly with the valve or the container, or through the binding element, if when the cover is connected to the  
25 valve or the container by a detachable connection can be dismounted from the valve or the container.

Opening of the hole of the container results from the necessary required displacement of the container and the valve one from the other relative to each other which is carried out through the guide members.

30 The guide members can be made in the form of an independent

construction or as parts of the receptacle, the container or the valve. The guide members can have any of the known forms, for example, the form of a ring, zigzag, spiral~~helical~~, rectilinear, etc.

The introduced component under the influence of its own weight and/or  
5 positive excess pressure enters the receptacle through the hole opening in the  
container enters into the receptacle and is mixed upmixed with the basic  
component.

Positive Excess pressure can be achieved if there is some gas, a gas in the  
10 container, for example, carbon dioxide, dioxide, in the container. Positive Excess  
pressure can also be achieved if the hydraulic pressure is created due to the  
displacement of the valve and the container one from the other relative to each  
other, for example, when the valve and the container are set placed relative to each  
other in accordance with the principle of the piston piston - cylinder or in case of  
15 the additional installation of blades inside the container and/or inside a part of the  
valve, closing the hole opening of the container. Creation of the positive excess  
pressure can also be achieved using other known ways methods.

There can be one or several holes openings in the container. At least, one  
hole opening is necessary to organize realize the process of mixing upmixing the  
components. Other holes Provision of other openings can be necessary for the  
20 technological purposes.

The introduced component can be in one of the following states: liquid,  
powder or granules.

Pinned In order to improve the homogeneity of mixing blades can be  
25 additionally set arranged on the parts of the container submerged into the basic  
component, on order to improve the homogeneity of mixing up. They allow  
organizing allowing to organize the flow of liquid components when the  
container or the valve is displaced. The above-mentioned pinned-blades are placed  
on the outside part of the container and the valve.

The reservoir, which is being patented, vessel allows two possibilities of  
30 mixing upmixing the components – the complete mixing up complete mixing

according to the formula of the manufacturer or dosed ~~mixing upmixing~~ according to the formula of the ~~consumer-user~~. The above-mentioned possibilities depend on the form and the position of the valve.

5 Uncontrolled complete ~~mixing upmixing~~ of the components according to the formula of the manufacturer is ~~made carried out~~ in case if the valve opens the ~~hole-opening~~ of the container when the cover is removed.

10 Dosed ~~mixing upmixing~~ of the components can be performed ~~is carried out~~ in case if the valve closes the ~~hole-opening~~ of the container when the cover is removed. In ~~this case, case of the latter,~~ having chosen the necessary portion 15 ~~amount~~ of the introduced component, you ~~can one~~ can interrupt the process of ~~mixing upmixing~~ the components at any time by the removal the cover from the ~~reservoir vessel~~. The valve closes the ~~hole opening of the in the body of the~~ container. The ~~portion amount~~ of the introduced component depends on the period of time during which the ~~reservoir vessel~~ is in the position "open". Thus, the 20 ~~consumer can model~~ This allows the user to modify parameters of the end product just before using it for its intended purpose.

20 In case if the ~~cover~~ the cover is ~~detachably~~ connected to the container or to the valve ~~by detachable connection~~, removal of the cover results in termination of interaction of ~~a cover~~ the cover with the container or the valve; the container rests in the ~~reservoir~~ valve, the container remains in the vessel.

25 If the cover is fixedly connected to the container or to the valve, the cover can remain on the ~~reservoir~~ vessel and the ~~evacuating release~~ of the end product is carried out through the channel intended for the output of the end product through the ~~hole-opening~~ in the cover with the removable cap, ~~thus, thereby~~ the container remains in the ~~reservoir~~ vessel.

The end product prepared during the ~~mixing upmixing~~ is taken out ~~released~~ from the ~~reservoir vessel~~ through the channel. The channel can be placed between the receptacle and the container or it can be placed inside the container or inside the valve.

30 In order to facilitate the process of taking ~~out release~~ of the end product from the

bottom of the receptacle, the reservoir vessel in question can additionally have be provided with a tube. In this case the end-product passes through this tube, which reaches the bottom part of the receptacle, and, then, it and passes into the channel for the output of the end product.

5 Other variants of using the invention, which is being patented, are as follows: realization of the patented invention are such that the end-product can pass through the outlet channel into an additional hole opening arranged in the cover or through the removable cap of a removable cap arranged on the cover.

10 Moreover, in order to provide for additional facilitation of the use of the patented vessel the upper part of the container or the valve can be made in the form of a neck which can be slided out from the receptacle; that facilitates still further the use of the reservoir sliding neck.

15 If the container ~~eonsists from~~ is carried out with several chambers with introduced components, it is possible to make produce more complex multicomponent products.

20 The above-mentioned versions variants of the offered engineering proposed technical solution have one whole are connected by a common functional purpose. They present the purpose and represent particular ways of making embodiments of the valve, the container, the cover, of the guide members and their interactions in order to achieve the integrated a common technical result, that is to provide the result – providing for displacement of the valve and the container one from the other and therefore, to put the reservoir relative to each other and putting the vessel into operating condition which activates in order to activate the process of mixing upmixing the components.

25 The best ways of implementation of the invention

The particular versions of the reservoir Particular variants of the proposed vessel for multicomponent products, which is being patented, products are described below with references to the enclosed illustrations drawings.

30 The reservoir vessel, which is being patented, guarantees the reliability of its design; easy and secure depressurization of the container with an introduced

component; reduction of actions to perform to activate the process of mixing up, to reduce the production cost, the possibility to manage the process of mixing up the components depending on the consumer request.

#### BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

5 Fig. 1: the design of the reservoir in the Fig. 1 shows the construction of the proposed vessel in cross-sectional view as in accordance to example 1; the1, wherein the valve is placed on the external part of the container, guide-the guide members are made in the ring form.form of a ring.

10 Fig. 2: the design of the reservoir in the Fig. 2 shows the construction of the proposed vessel in cross-sectional view as in example 2;according to example 2, wherein the valve is placed on the internal-inner part of the container, the guide members are made in the form of zigzag.

15 Fig. 3: the design of the reservoir in the Fig. 3 shows the construction of the vessel in cross-sectional view as in example 3;according to example 3, wherein the valve is fixedly connected with cover by fixed connection, the to the cover, the cover is provided with a removable cap is fitted into the cover, the guide members are formed by walls of the container and theand of the valve.

20 Fig. 4: the design of the reservoir in the Fig. 4 shows the construction of the vessel in cross-sectional view as in example 4;according to example 4, wherein the container is an element of the receptacle, the upper part of the valve is made in the form of a tube.

25 Fig. 5: the design of the reservoir in the Fig. 5 shows the construction of the vessel in cross-sectional view as in example 5;according to example 5, wherein hydraulic pressure,pressure is used resulting from of the displacement of the valve and the container one from the other, is used.relative to each other.

30 Fig. 6: the design of the declared reservoir in the Fig. 6 shows the construction of the declared vessel in cross-sectional view as in example 6;according to example 6, wherein displacement of the container relative to the valve and the container one from the other results from the indirect action of pressure of the introduced component.

Fig. 7: the design of the reservoir in the Fig. 7 shows the construction of the vessel in cross-sectional view as in accordance to example 7 with the channel for the output of the end product through the valve; the channel is connected valve, connection of the channel with a tube which reaches reaching the bottom part of the receptacle, installation is made of a spring between the container and the valve of a spring group valve.

Fig. 8: the design of the declared reservoir in the Fig. 8 shows the construction of the proposed vessel in cross-sectional view as in example 8; according to example 8, wherein the channel intended for the output of the end product is inside the container.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

##### Example № 1. No. 1.

Fig. 1 of the reservoir proposed vessel shows the following elements: the receptacle (the upper part) - 1 with the basic component - 2; the container - 3 with the introduced component - 4 and carbon dioxide - 5; the hole opening - 6 in the container 3; the valve - 7; the channel - 8; the cover - 9; the push bar - 10; the guide members - 11 in the form of the ring.

When twisting the cover 9 with detachable connection is wound, the reservoir connection, the vessel opens and the pressure in the receptacle 1 becomes equal to the atmospheric pressure; simultaneously the push bar 10 transfers the movement to the container 3 which displaces along the guide members 11 against the valve 7 fixed in the upper part of the receptacle 1. The reservoir vessel is set in position "open", unlinking the hole opening 6 of the container 3 and the valve 7. Under the action of the pressure of the carbon dioxide 5 the introduced component 4 is thrown out in the receptacle 1 through the hole opening 6 of the container 3 and is mixed up with the basic component 2.

If the valve 7 opens the hole opening 6 of the container 3 when the cover

with detachable connection 9 is dismounted, there occurs a uncontrolled an uncontrolled complete mixing upmixing of component 2 and component 4 occurs according to the formula of the manufacturer.

In case if the container 3 is made from transparent materials and the valve 7 closes the hole opening 6 of the container 3 when the cover with detachable connection 9 is dismounted, there occurs dosed mixing updosed mixing of the components. When necessary portion amount of the introduced component 4 was chosen is selected, the consumer user can stop the process of mixing upmixing process of the components by twisting off the cover with detachable connection 9 until it is detached. The container 3 and the valve 7 close the hole opening 6 of the container 3.

In such a way the consumer can model user modifies the parameters of the end product just before using it for its intended purpose.

After the cover with detachable connection 9 is dismounted, the end-product can be freely taken out released through the channel 8 formed by the receptacle 1 and the container 3.

#### Example № 2. No. 2.

Another version variant of the reservoir proposed vessel differs from the reservoir shown in example № 1 vessel according to example No. 1 in particular form of design realization and interaction of the container and the valve. Fig. 2 of the reservoir proposed vessel shows the following elements: receptacle (the upper part) - 1 with the basic basic component - 2; the introduced introduced component - 4; carbon dioxide - 5; the hole opening 6 of the container - 20; the channel channel - 8; the cover cover with detachable connection - 9; the push push bar - 10.

This version variant differs from version in Example 1 in the following variant of example No. 1 in that the guide members - 22 are of the have a zigzag form, form, and the valve - 21 is placed arranged on the interior inner side of the container - 20 which is fixed in the upper part of the receptacle 1.

When being used, the cover with detachable connection 9 transfers the

movement through the push bar 10 to the valve 21 which moves along the guide members 22 of the zigzag form and is displaced in a wave-like manner against relative to the container 20 fixed in the upper part of the receptacle 1. The reservoir vessel is set in position "open", unlinking the hole-opening 6 of the container 20 from the valve 21.

Example № 3. No. 3.

Fig. 3 shows a version of the reservoir variant of the vessel for multicomponent products, which differs from version № 1 in variant No. 1 in the particular form of design and realization and the relative position of structural elements against each other. Fig. 3 shows the following elements: the receptacle (the upper part) - 1 with the basic component - 2; the introduced component - 4; the cover - 31, made with a removable cap 33, the valve - 34, fixedly connected with the cover 31 and fitted inside the container - 32, which is the latter fixedly connected to the receptacle 1; the valve - 35. The design construction operates similarly to the previously described versions. Its basic difference from the above-mentioned designs is in the following: that the cover with the detachable connection 31 is fixedly connected to the valve 34, so that when the cover 31 is twisted, the container 32 opens. When the cap 33 is removed, the end-product is taken out through the channel 35 without dismounting of the cover 31.

Example № 4. No. 4.

Fig. 4 shows the version of the reservoir proposed vessel for multicomponent products. This version of reservoir design contains the valve - 41, the receptacle - 1 with the basic component - 2, the container - 42 which is made as an element of the receptacle - 1, the cover - 43, the binding element - 44, made in the form of the retention pin, a clamp, the introduced component - 4, the hole-opening - 6 of the container 42, the channel - 8. The basic difference from the designs

in version № 1 to the variants according to variant №. 1 is that the container 42 is an element of the receptacle 1, the upper part of the valve 41 is made in the form of a neck. When removing the cover 43 is dismounted, the binding element 44 raises the valve 41 above the receptacle 1 that which results in unlinking of the valve 41 and the hole opening 6 of the container 42. The cover 43 is removed, and the valve 41 is fixed in the top position above the receptacle 1. After mixing upmixing the components the end-product is taken outreleased through the channel 8 of the valve 41.

Example № 5.No. 5.

Fig. 5 shows the version of the reservoir consisting of the following elements:variant of the vessel showing a receptacle (the upper part) - 1 with the basic basic component - 2, the introducedintroduced component - 4, the containercontainer 50 with the hole opening 6; the channelchannel - 8; the cover withcover with a detachable connection - 9; the pushpush bar - 10, the valvevalve 51, the guideguide members 52 made on the form of a thread; in the upperthe upper part of the container 50 there is a fabrication holeis provided with a technological opening - 53. The basic difference from version described in example № 1, consists in the following: there are blades 54 to the variant of example No. 1 is that in the container 50 and the valve 51; blades 54 are arranged, one of the bladeswhich is connected to the valve 51, and the second is connected to the internal\_inner part of the container 50. When the cover 9 is twisted, the valve 51 and the hole opening 6 of the container 50 are disconnected;disconnected, simultaneously the introduced component 4 undergoes the action of pressure, created is set under pressure by the blades 54. Under the effect of the hydraulichydraulic pressure the introduced component 4 is thrown out from the container 50 at a highhigh flow speed of a stream and is mixed up withwith the basic component 2.

Example № 6.No. 6.

Fig. 6 shows the version of the reservoirvariant of the proposed vessel with the showing a receptacle (the upper part) - 1 with the basica basic component - 2; the containercontainer - 60 with the introducedan introduced component - 4 and carbon dioxide - 5; the holeopening 6 in the containercontainer - 60; the valvevalve -61; the channelchannel - 8; a cover with detachable connection - 9 the internalinner part of which is flat; the pushpush bar - 10; the guideguide members - 62.

The design of the reservoir of this versionThe present variant of the construction of the vessel differs from the one of the version № 1variant No. 1 in the a different position and the form of the container60 and container 60, the valve 61; the guide61, and the guide members 62 form a part of the receptacle 1, the introduced component 4 is under pressure of carbonfrom carbon dioxide 5, the push bar 10 is in a is represented by a flat part of the cover 9 and presses the container 60 to the valve 61. When Thus, when being used, the cover with detachable connection 9 risesrises above the receptacle 1 and through the push bar 10 reduces the influence to the container 60 which is under the positiveexcess pressure of the component 5; the 5, the introduced component 4 liftsraises the container 60 along the guide members 62 againstrelative to the valve 61. The reservoirvessel is set in position «open», unlinking the holeopening 6 of the container 60 and the valve 61.

#### Example № 7.No. 7.

Fig. 7 shows the version of the reservoirvariant of the proposed vessel for multicomponent products which consists of the following elements: the showing: receptacle (the upper part) - 1 with the basica basic component - 2; the containercontainer 70 with the introducedintroduced component - 4; the holeopening 6 of thein the container-70; the channelchannel - 8; the bindingbinding element - 10. Except for the different if its form container 70 this version differs from the version № 1 in the following: it As distinct from variant No. 1 the present variant in addition to the different form of the container 70

contains the valve a valve 71, the cover a cover 79 with the detachable~~detachable~~ connection made in the form of the retention pin, the a clamp, guide members 72, the spring group~~spring~~ 74, the tube a tube 73 connected to the in connection to a channel 8. The container 70 and the valve 71 are located above the receptacle 1; 5 the 1, and the guide members 72 are made as a part of the sides of the valve 71 and the container 70. The channel for the output of the end product 8 passes through the tube 73 and the valve 71. When being used,in use, through the binding element 10 the cover with detachable connection 79 transfers the movement to the valve 71 through the binding element 10. The valve 71 which under the action 71, 10 which under the influence of the cover 79 and the spring group 74 goes moves along the guide members 72 and moves upwards against~~displaces~~ upwardly relative to the container 70. The reservoir vessel is set in position «open», unlinking the hole opening 6 of the container 70 and the valve 71.

Example № 8.No. 8.

15 Fig. 8 shows the version of the reservoir variant of the proposed vessel for multicomponent products which consists of the following elements: the showing: a receptacle (the upper part) - 1 with the basic component - 2; the container 80 made with the open an open upper part, the introduced an introduced component - 4; the hole opening - 6 of the container 80; the cover cover with detachable connection - 9; the push push bar - 10.

20 This version differs from the version № 1 in the following: itAs distinct from variant No. 1 the present variant contains contains a different in its form container 80, the valve a valve 81, the guide members 82 and the guide members 82, introduced component 4 in the form of a powder. When being used,in use the cover with with the detachable connection 9 transfers the movement through the push bar 10 to the container 80 which goes moves along the guide members 82, which give provide only rotational movement, and moves against~~displaces~~ relative to the valve 81. The reservoir vessel is set in position «open», unlinking the hole opening 6 of the container 80 and the valve 81.

The above-mentioned ~~versions~~variants of the ~~design~~construction of the ~~reservoir~~vessel for multicomponent products operate similarly to each other. Other possible ~~designs~~variants of the ~~offered~~proposed vessel are reduced to different combinations of ~~the ways~~ways of connection of the ~~container~~, ~~the container and the valve~~, and the guide members.

5

#### Industrial utilizationApplicability

The use of the ~~reservoir~~vessel for multicomponent products will make it possible to ~~improve~~provide for improvement of the quality of such kind of reservoirs~~the latter~~ due to the new~~to~~ new functional capabilities: reliability of a designconstruction; easy and safe depressurization of the container with the introduced component; reduction of actions to activate the process of mixing~~mixing~~process up; taking~~out~~release of the end product without the removal of the container.

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Besides, there appeared~~Furthermore, the appearance of the new functional~~ capabilities providing~~providing~~ for management of the process of mixing~~up~~mixing process of the components; theycomponents will allow the consumer user to model parameters of the end product just before using it for its intended purpose, taking into account particular circumstances and conditions.